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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/572,089

03/16/2006

Jean-Yves Le Naour

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EXAMINER

SAFAIPOUR, BOBBAK

ART UNIT

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2618

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/572,089	Applicant(s) LE NAOUR ET AL.	
	Examiner BOBBAK SAFAIPOUR	Art Unit 2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 January 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 5-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 5-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 1/29/2008 has been entered.

Claims 2-4 have been cancelled. New claims 7-12 have been added. **Claims 1 and 5-12** are now pending in the present application.

Response to Arguments

Applicant argues that Ammar fails to disclose a wideband filtering means that allows through signals whose frequency corresponds to the transposed signal independently from the frequency of the local oscillator.

The Examiner respectfully disagrees. Ammar et al. disclose basic circuit components where the low frequency transmitter signal would be received from a modem in the indoor unit (IDU) and into a diplexer 68 through an input/output port 68a. From the diplexer 68, signals can pass along the transmitter circuit chain 42 and be up-converted to an intermediate frequency (IF) and amplified. As illustrated, the signal from the diplexer is passed into a mixer 69 where the signal is mixed with a local oscillator signal generated from a local oscillator 70 as part of the frequency synthesizer circuit 52 to form the proper intermediate frequency. A bandpass filter 71 (read as wideband filter) eliminates certain spurious signals and frequencies by appropriate filtering. A variable gain amplifier 72 provides additional gain for the signal that is transmitted

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along the transmitter circuit chain 42 to components on the transceiver board. The signal from the variable gain amplifier 72 is mixed at a mixer 73 with another local oscillator signal to form the desired transmission frequency. A bandpass filter 74 filters unwanted and spurious signals (also read as wideband filtering). A transmit high gain amplifier 75 further amplifies the signal for transmission. The waveguide transition 76 allows signal conversion for transmission and also permits a signal loop for analysis via a loop back circuit 77. (figure 2 and paragraph 41)

The simple fact remains that the claims only broadly recite a wideband filtering means. It has been shown that a wideband filter is taught in Ammar et al. If the Applicant intends to differentiate between the band pass filter of Ammar et al. and the wideband filter of the present application, then such differences should be made explicit in the claims. As a result, the argued features are written such that they read upon the cited references; therefore, the previous rejection still applies.

Although the Applicant agrees with the Examiner that Birleson discloses a local oscillator with a frequency that can be selected from at least two frequencies, however, the Applicant argues that Birleson fails to disclose a configurable rejection filter depending on the frequency selected for the local oscillator.

The Examiner respectfully disagrees. Birleson shows, in figure 1, that filter 109 is a band pass filter that provides coarse channel selection in tuner 10. As a matter of design choice, filter 109 may be constructed on the same integrated circuit substrate as mixers 103 and 110 (read as a configurable rejection filter depending on the frequency selected for the local oscillator) or filter 109 may be a discrete off-chip device. Filter 109 selects a narrow band of channels or even a single channel from the television signals in the first IF signal. Following IF filter 109, mixer

110 mixes the first IF signal with a second local oscillator signal from local oscillator 111 to generate a second IF signal. Mixer 110 may be an image rejection mixer, if necessary, to reject unwanted image signals. The characteristics of first IF filter 109 will determine whether mixer 110 must provide image rejection. If the image frequencies of the desired channel are adequately attenuated by first IF filter 109, then mixer 110 may be a standard mixer. (figure 1 and paragraphs 51-52)

The simple fact remains that the claims only broadly recite a configurable rejection filter. It has been shown that a configurable rejection filter is taught in Birleson. If the Applicant intends to differentiate between filter 109 of Birleson and the configurable rejection filter of the present application, then such differences should be made explicit in the claims. As a result, the argued features are written such that they read upon the cited references; therefore, the previous rejection still applies.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.

2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1 and 5-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Ammar et al (US Patent Application Publication #2004/0203528 A1)** in view of **Birleson (US 2007/0182866 A1; hereinafter Birleson)**.

Consider **claim 1**, Ammar et al disclose outdoor unit (abstract, paragraphs 39-49, figure 2) of a reception terminal including a return channel, wherein the return channel comprises: a transposition means (read as mixer) that transposes a signal to be transmitted using the signal provided by the local oscillator (figure 2; paragraph 41; The signal is mixed at a mixer with the local oscillator), and a wideband filtering means that allows through signals whose frequency corresponds to the transposed signal independently from the frequency of the local oscillator (paragraph 41; a band pass filter eliminates certain spurious frequencies and signals by appropriate filtering)

Ammar et al fail to disclose a local oscillator providing a signal with a frequency that can be selected from at least two frequencies and a configurable rejection filter depending on the frequency selected for the local oscillator.

In related art, Birleson discloses a local oscillator providing a signal with a frequency that can be selected from at least two frequencies (figure 1, local oscillators 104 and 111; paragraph 53) and a configurable rejection filter depending on the frequency selected for the local oscillator (paragraphs 51-52; read as filter 109).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the teachings of Birleson into the teachings of Ammar et al so that the local oscillator frequencies are selected so that the picture carrier of a particular channel in the RF signal will appear at 45.75 MHz in the second IF signal, although it is not limited to specific IF or LO frequencies.

Consider **claim 11**, Ammar et al disclose outdoor unit (abstract, paragraphs 39-49, figure 2) of a reception terminal including a return channel, wherein the return channel comprises: a transposition means (read as mixer) that transposes a signal to be transmitted using the signal provided by the local oscillator (figure 2; paragraph 41; The signal is mixed at a mixer with the local oscillator), and a wideband filtering means that passes the signal from said transposition means resulting from selection of any of said at least two local oscillator frequencies (paragraph 41; a band pass filter eliminates certain spurious frequencies and signals by appropriate filtering)

Ammar et al fail to disclose a local oscillator providing a signal with a frequency that can be selected from at least two local oscillator frequencies and a configurable rejection filter for

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rejecting a leak of transposition frequency for at least one of said at least two local oscillator frequencies.

In related art, Birleson discloses a local oscillator providing a signal with a frequency that can be selected from at least two frequencies (figure 1, local oscillators 104 and 111; paragraph 53) and a configurable rejection filter for rejecting a leak of transposition frequency for at least one of said at least two local oscillator frequencies (paragraphs 16-17 and 51-52; read as filter 109).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the teachings of Birleson into the teachings of Ammar et al so that the local oscillator frequencies are selected so that the picture carrier of a particular channel in the RF signal will appear at 45.75 MHz in the second IF signal, although it is not limited to specific IF or LO frequencies.

Consider **claim 5**, and **as applied to claim 1 above**, Ammar et al, as modified by Birleson, disclose the claimed invention wherein the local oscillator comprises means for selecting the oscillation frequency. (Birleson: figure 1; paragraph 53)

Consider **claim 6**, and **as applied to claim 5 above**, Ammar et al, as modified by Birleson et al, disclose the claimed invention wherein the means for selecting the oscillation frequency is either a manual switch or a command from an indoor unit or terminal. (Birleson: figure 1; paragraph 53)

Consider **claim 7**, and **as applied to claim 6 above**, Ammar et al, as modified by Birleson et al, disclose the claimed invention wherein the configurable rejection filter comprises a guided structure, wherein the cover of said guided structure transforms said configurable rejection filter into one of a band rejection filter that rejects a bandwidth corresponding to a leak of the transposition frequency or into a non-filtering element. (Birleson: paragraphs 16-17)

Consider **claim 8**, and **as applied to claim 7 above**, Ammar et al, as modified by Birleson et al, disclose the claimed invention wherein the cover comprises one of a flat cover, or a cover including slot-coupled resonant cavities (Ammar et al: paragraph 90) such that said cover transforms the configurable rejection filter into a band rejection filter for rejecting a bandwidth corresponding to a leak of the transposition frequency in the wideband (Birleson: paragraphs 16-17).

Consider **claim 9**, and **as applied to claim 7 above**, Ammar et al, as modified by Birleson et al, disclose the claimed invention wherein the cover comprises one of a flat cover or a cover having a plurality of profiled elements such that said cover transforms the configurable rejection filter into a band rejection filter for rejecting a bandwidth corresponding to a leak of the transposition frequency in the wideband. (Birleson: paragraphs 16-17)

Consider **claim 10**, and **as applied to claim 7 above**, Ammar et al, as modified by Birleson et al, disclose the claimed invention wherein the cover comprises a flat cover such that said cover transforms the configurable rejection filter into a band rejection filter for rejecting a

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bandwidth corresponding to a leak of the transposition frequency in the wideband. (Birleson: paragraphs 16-17)

Consider **claim 12**, and **as applied to claim 11 above**, Ammar et al, as modified by Birleson, discloses the claimed invention wherein the configurable rejection filter is configured through placement of a cover on a waveguide. (Ammar et al: paragraph 90; Birleson: paragraphs 51-52)

Conclusion

Any response to this Office Action should be **faxed to** (571) 273-8300 **or mailed to:**

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Hand-delivered responses should be brought to

Customer Service Window
Randolph Building
401 Dulany Street
Alexandria, VA 22314

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Bobbak Safaipour whose telephone number is (571) 270-1092. The Examiner can normally be reached on Monday-Friday from 9:00am to 5:00pm.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Matthew Anderson can be reached on (571) 272-4177. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free) or 703-305-3028.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist/customer service whose telephone number is (571) 272-2600.

/Bobbak Safaipoor/
Examiner, Art Unit 2618

April 12, 2008

/Matthew D. Anderson/

Supervisory Patent Examiner, Art Unit 2618